

## General Research Methods

co-ordinator: Dr. László Csernoch vice-rector

NEPTUN code: DEAKIDI

Place: UD Main Building Auditorium Maximum (4<sup>th</sup> floor)

Lectures: Fridays 14.00 – 15.30 (first lecture: 8<sup>th</sup> February, 2019.)

1 credit

final test

Obligatory for 1<sup>st</sup> year PhD students, optional for the others.

### **8<sup>th</sup> February, 2019.**

Dr. László Fésüs: Code of conduct for research integrity. Science ethics codes in Europe and Hungary

*The lecture overviews moral and ethical aspect of research and the need to have codes of conduct for maintaining research integrity. The recently revised European Code, written by ALLEA (All European Academies) and declared as the official document of the European Union, is compared to the Code of Science Ethics of the Hungarian Academy of Sciences applied throughout the country. These codes cover all aspect of good research practices including publishing activities. It will be discussed during the lecture what the most serious violation of research ethics are and how they should be handled in institutions and by the research community.*

### **22<sup>nd</sup> February, 2019.**

Dr. Zsolt Gémesi: Innovation management in practice

*Commercialising intellectual property. From idea to investment, the path across the death valley. Conceptual basics, incubation, acceleration, business model, lean methodology. The role of a university incubator in shortening time-to-market, providing education, training and vital business contacts for start-ups.*

### **1<sup>st</sup> March, 2019.**

Dr. Tamás Bene: Research collaboration, IP protection and the basics of university technology transfer

*Overview of the typical forms of research collaboration. MTA, CDA, CRADA, NDA, DESCA: basic types of research agreements. Evolution of the IP protection system and detailed overview of the forms of intellectual property. Copyright issues in the research management process. IP management at universities in Europe, in the USA and at the University of Debrecen. Publish or patent? What is the value of my patent? Assignment, license, spin-off or start-up? Guide to the technology transfer activity at universities.*

### **8<sup>th</sup> March, 2019.**

Dr. József Popp: How to measure scientific activity

*Why and how scientific activity should be measured. What kind of numerical indicators should be used. Summary, survey and applications of the most basic indicators (e.g. impact factor, citation number, Hirsch index).*

**29<sup>th</sup> March, 2018.**

Dr. Péter Kakuk: Current Challenges in Fostering the Integrity of Science: The Hwang Woo Suk case.

*The lecture follows the story of the infamous South Korean researcher's scientific fraud case as a template in order to introduce the most relevant ethical issues of research integrity developing in our globalized research environment. The lecture attempts to provide the audience with an overview on traditional ethical issues concerning human subject research protections (informed consent of research participants, researchers' responsibility on risk minimization etc.), introducing an international ethical perspective on research misconduct, falsification and fabrication of research results, issues related to conflict of interests, and questions on the rules of authorship in scientific publishing.*

**5<sup>th</sup> April, 2019.**

Judit Fazekas-Paragh – Enikő Pergéné Szabó: From the choice of topic to publication: information resources and tools in scholarly communication I.

*How to find appropriate material to write an article? How to download them from the internet? What tools can help us meet the formal requirements of scholarly articles (citation, references, etc...)? What are the possibilities of academic publication. How to manage our professional activities to be recognized. The lecture presents the process of scholarly communication through exact examples.*

**12<sup>th</sup> April, 2019.**

Fazekas-Paragh – Enikő Pergéné Szabó: From the choice of topic to publication: information resources and tools in scholarly communication II.

*Knowledge management. The role of visibility in scholarly communication, networked researcher; The method and resources of enhancing visibility - Research networks; The improved iDEa Academic Profiles. Open access in scholarly communication (possibilities and ways of OA publishing; the rights and obligations of researchers; OA as part of the institutional publishing policy).*

**3<sup>rd</sup> May, 2019.**

Dr. József Baranyi: Emergence of complexity, from observations to predictions

*What dilemmas do we face when our inference is based on uncertain knowledge and observations? How can mathematical modelling help? What role do stochastic randomness and deterministic laws play in real life events and in their predictions? How does a system of complex interactions introduce chaos in otherwise deterministic predictions? In this talk we discuss these questions via both classical and current examples from life- social and engineering sciences.*

**10<sup>th</sup> May, 2019.**

Dr. Mihály Fónai – Dr. Éva Huszti: Types of research, groups of research methods and structure of researches.

*Types of researches: basic research, applied researches and action research. The logic of research, the inductive and the deductive logic, their characteristics and their effect on the structure of research. Correlations between types of logic of researches and type of researches. The main features of qualitative and quantitative research methods and their scope of application. The steps of social science researches from problem definition to publication of results.*

**17<sup>th</sup> May, 2019.**

Test

Presentations, slides of the lectures will be available at the university portal:

<https://unideb.hu/hu/node/345>